

Water Resource Workshop

June 1, 2006



SCDOT Data Collection/Planning Tools and Techniques

Types of Data Collected

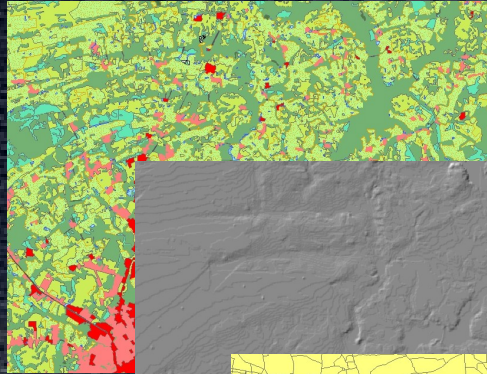
- Accident Data
- Average Daily Traffic
- Cable Barrier Hits
- Travel Times
- Customer Expectations
- Road Surface Smoothness

Types of Data Collected

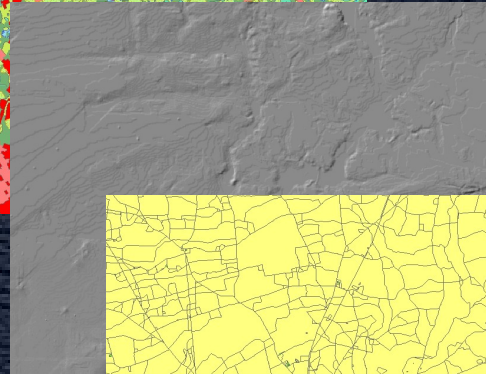
- Performance of Surfacing Mixtures
- Threatened and Endangered Species
- Wetland Resources
- Cultural Resources
- Community Impacts

What Do We Do With This Data?

Geographic Information Systems (GIS)



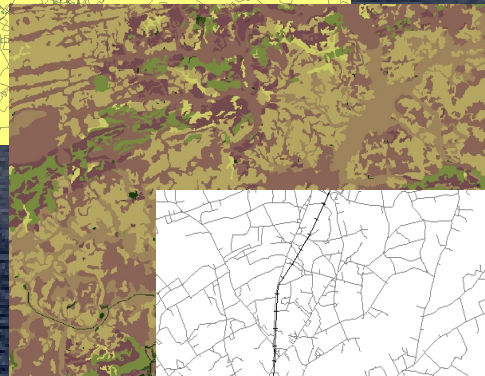
NWI / Land Use



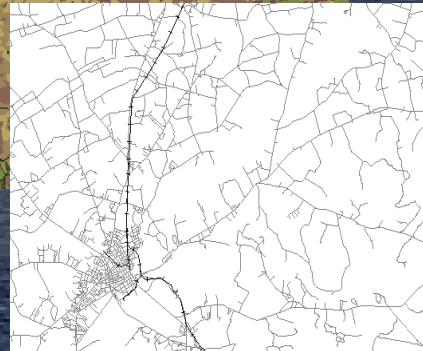
Digital Elevation Model (Slo



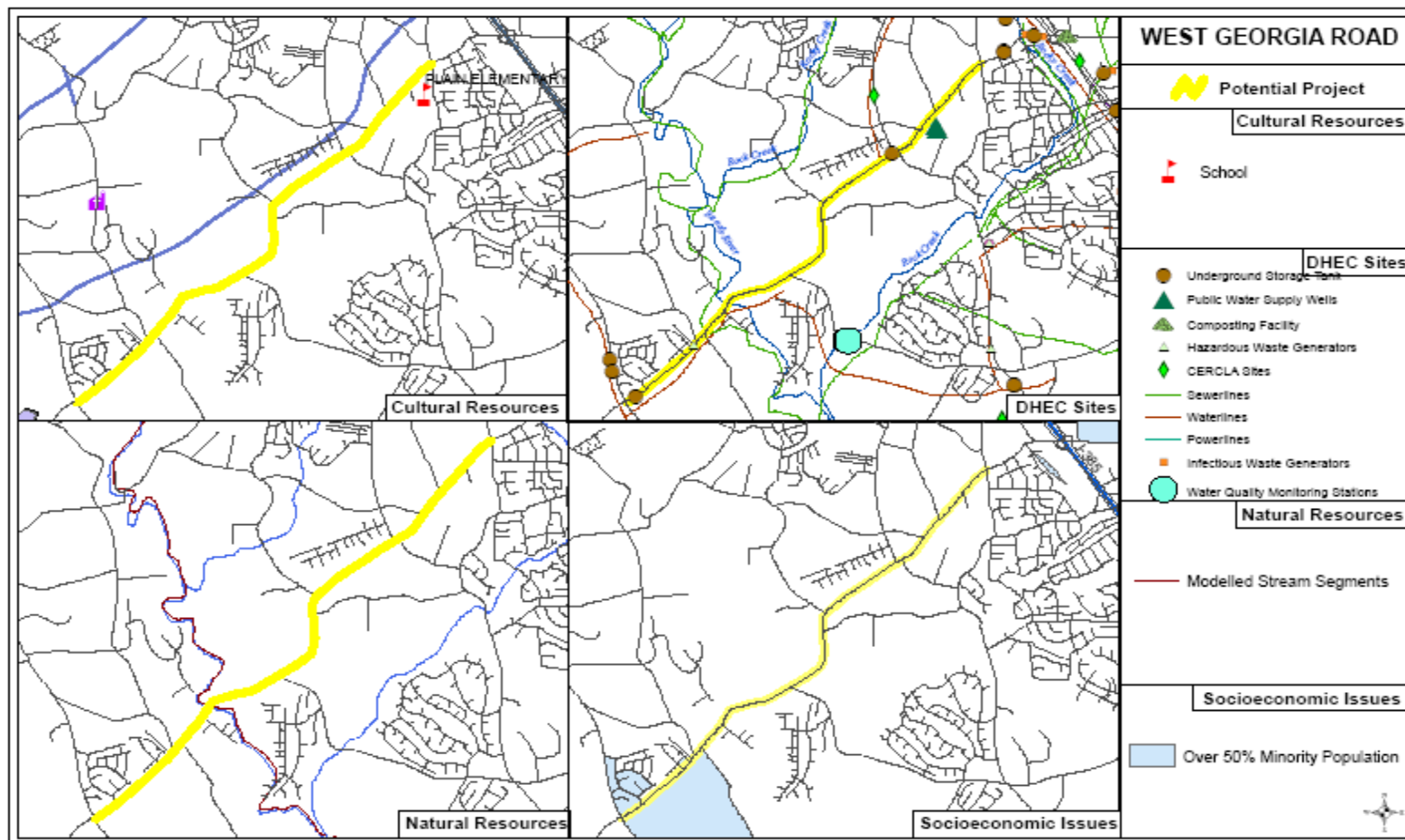
**Socioeconomic /
Demographic (Census)**



Soils



**Existing
Transportation
Infrastructure**



ADVANCED PROJECT PLANNING REPORT
for
Proposed Improvements to Road S-272 (West Georgia Road)
in Greenville County



Project Abstract:

The South Carolina Department of Transportation (SCDOT) in partnership with the Greenville-Pickens Area Transportation Study (GPATS) has developed this Advanced Project Planning Report (APPR) for the proposed improvements to Road S-272 (West Georgia Road) adjacent to the Town of Simpsonville in Greenville County. This APPR is a preliminary evaluation conducted within a study area to identify the potential benefits, impacts and areas of concern to the human and natural environment by the proposed roadway improvement project. The project's focus is to upgrade West Georgia Road along an existing alignment, new alignment or a combination of existing and new alignments in and adjacent to the Town of Simpsonville.

Date of Approval

MPO Executive Director

Date of Approval

COG/MPO Staff Planner

Date of Approval

SCDOT Director of Planning

Date of Approval

SCDOT Chief of Statewide Planning

Date Completed

SCDOT Environmental Planner

City/County Officials:

Date of Approval

Signature & Title

Date of Approval

Signature & Title

For additional information please contact:
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Telephone: (803) 737-1445



Environmental Assessment **SC Route 6/60**

**From US 378 to River Road on SC Route 6 and
from SC Route 6 to Irmo Drive on SC Route 60
Lexington County, South Carolina**



Submitted to
US Department of Transportation
Federal Highway Administration

Submitted by
South Carolina Department of Transportation

8-20-02 Blanche S. Spraul
Date of Approval South Carolina Department of Transportation

8-20-02 Patrick L. Tyndall
Date of Approval Federal Highway Administration

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Constr. PIN. 26231 and 26235
Project No. SIB-SB32(001) and SIB-SB32(002)



I-73 in South Carolina “Pathway to Progress”

**The South Carolina
Department of Transportation**



I-73 - Alternatives Analysis

The Challenge

Identify corridors that satisfy the purpose and need and minimize the environmental impacts.

Technical Challenges:

- Numerous Data Types
- Large Data Sets
- Need for Quick / Flexible Processing

I-73 - Alternatives Analysis

Study Area Analysis Techniques

Use of Technology

- Using GIS to meet the challenge (size of Study Area and schedule)
- GIS provides best means to:
 - Merge and analyze large spatial datasets
 - Quantify environmental impacts
 - Disseminate “understandable” results

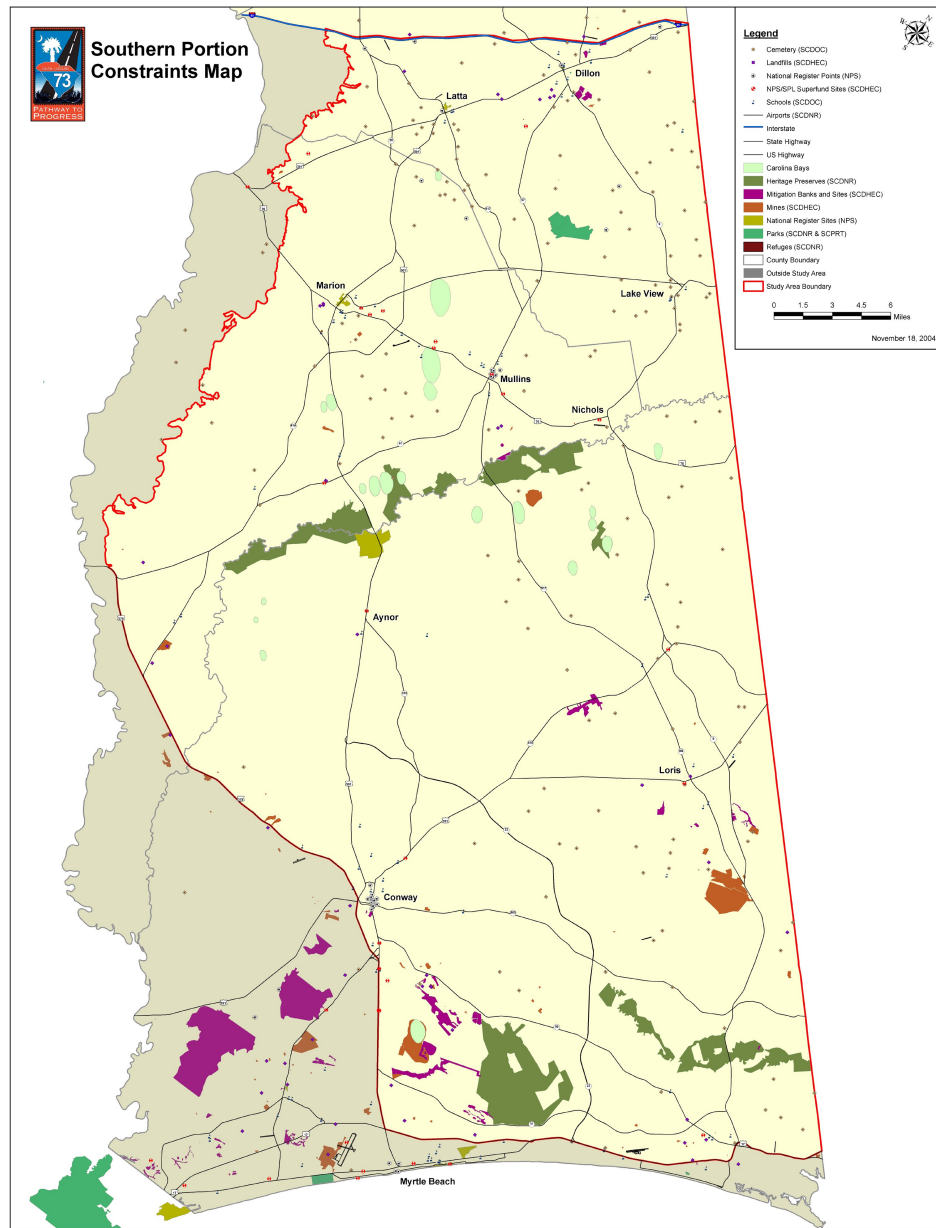
I-73 - Alternatives Analysis

Using GIS to meet the Challenge

Corridor Analysis Tool (CAT)

- Automates many of the GIS functions
- Provides Intuitive Interface
- Allows development and comparison of multiple analysis scenarios

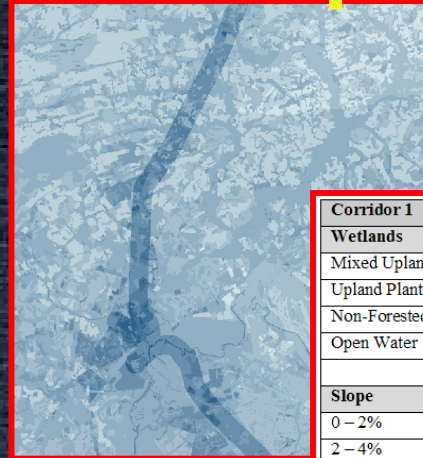
Southern Project- Constraints Map



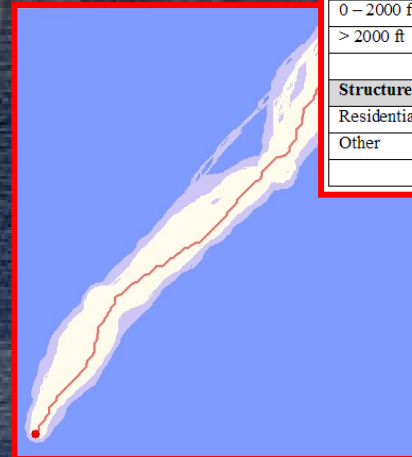
CAT - Corridor Output

➤ Quantification of potential impacts

➤ Quickly identify reasonable corridors

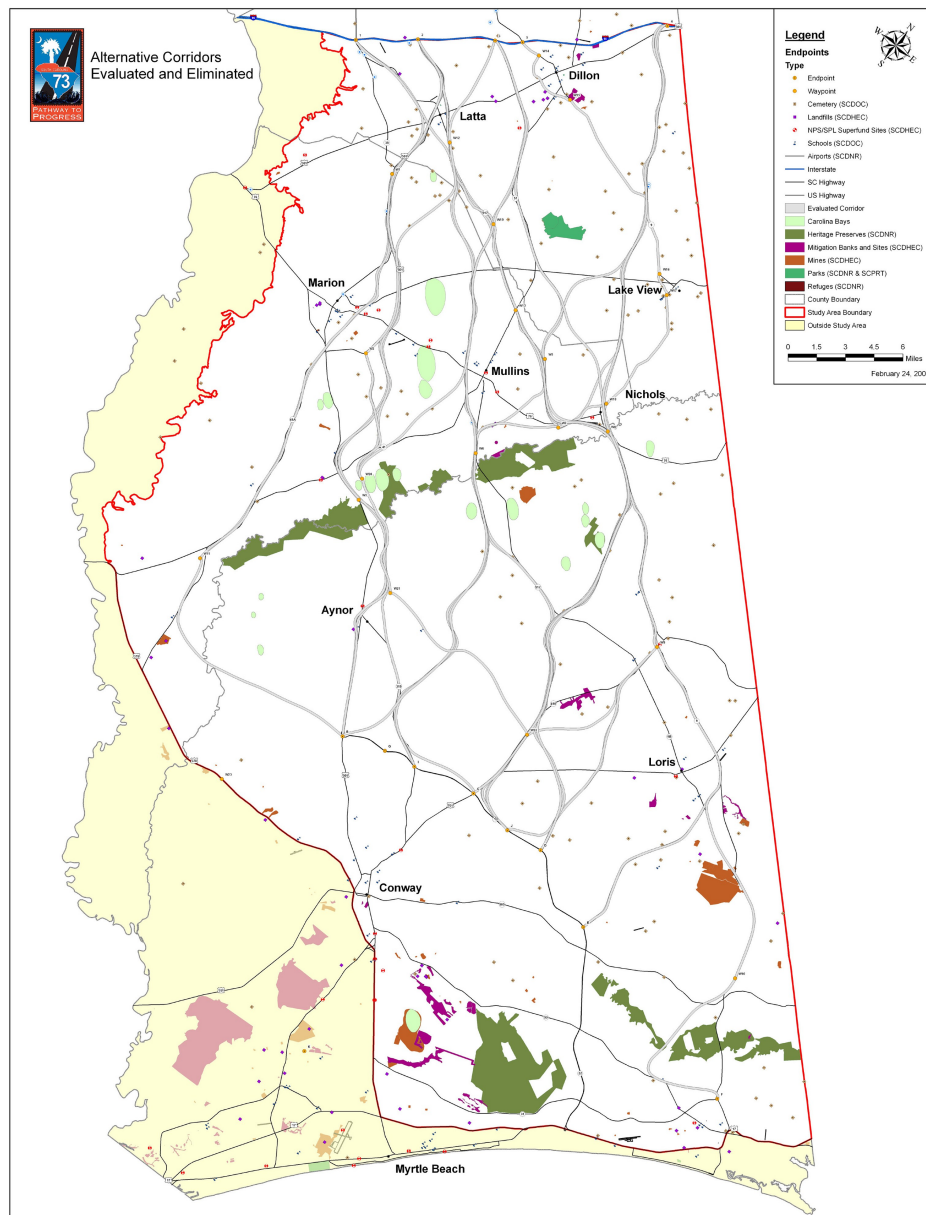


Corridor 1	
Wetlands	
Mixed Upland Forest	3000 acres
Upland Planted Pine	1000 acres
Non-Forested Wetland	1000 acres
Open Water	
Slope	
0 – 2%	3000 acres
2 – 4%	1000 acres
4 – 6%	500 acres
> 6%	500 acres
Hazardous Waste Site Buffers	
0 – 2000 ft	50 acres
> 2000 ft	4950 acres
Structures	
Residential	750
Other	300



Southern Project

All Alternatives
developed by
the CAT program



Southern Project

ALL Potential Alternative Corridors

